

Translation

PATENT COOPERATION TREATY

PCT/EP2003/013352



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 02SGL0110WOP	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/EP2003/013352	International filing date (day/month/year) 27 November 2003 (27.11.2003)	Priority date (day/month/year) 03 December 2002 (03.12.2002)
International Patent Classification (IPC) or national classification and IPC H05B 3/03		
Applicant SCHOTT AG		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>8</u> sheets, as follows: <div style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</div> b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <div style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application</div>

Date of submission of the demand 17 April 2004 (17.04.2004)	Date of completion of this report 17 March 2005 (17.03.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2003/013352

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ The international application as originally filed/furnished
- ☒ the description:
- pages _____ 1, 2, 4-33 _____, as originally filed/furnished
- pages* _____ 3, 3a _____ received by this Authority on _____ 10 December 2004 (10.12.2004)
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ 1-35 _____ received by this Authority on _____ 10 December 2004 (10.12.2004)
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages _____ 1/4-4/4 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/13352

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-35	YES
	Claims		NO
Inventive step (IS)	Claims	1-35	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-35	YES
	Claims		NO

2. Citations and explanations

1. This report makes reference to the following search report citations D1 and D2; the same numbering will be used throughout the procedure:

D1: GB-A-644 463 (BALZARETTI MODIGLIANI SPA)

11 October 1950 (1950-10-11)

D2: DE-A-199 25 554 (SMS DEMAG AG) 7 December 2000

(2000-12-07).

2. The present application complies with the requirements of PCT Article 33, because the subject matter of claims 1-35 is novel within the meaning of PCT Article 33(2) and because the subject matter of claims 1-35 involves an inventive step within the meaning of PCT Article 33(3).

The application does not comply with the requirements of PCT Article 6, because claim 1 is not clear.

3. With reference to claim 1, document D1 discloses:

heating device for the conductive heating of melts, more particularly for the rapid fusion, refining and/or conditioning of melts, which comprises at least one electrode (see document D1, page 1, lines 15 to 20), the heating device comprising at least one first cooling system (claim 1).

4. It would appear from the description, pages 18 and 19, that the following feature is essential to the definition of the invention:

the heating device comprises an electrode with a melt contact material which is connected to a support device and rests with one side on the support device (see also claims 15, 16).

Claim 1 is not clear and does not comply with the requirements of PCT Article 6, because the subject matter for which protection is sought is not clearly defined.

The above-mentioned functional statements do not enable a person skilled in the art to ascertain those technical features which are necessary for implementing the device.

5. Claim 1 does not comply with the requirements of PCT Article 6, because the subject matter for which protection is sought is not clearly defined. Claim 1 attempts to define the subject matter in terms of the result to be achieved. In the present case, however, this formulation is not allowable, because it seems possible to describe the subject matter of the application more precisely, that is, to indicate the measures for achieving the effect.

See, in particular:

"at least one first cooling system comprising means for temporally and spatially variable control and/or regulation of the cooling power in a plurality of selectable regions of the electrode".

The examiner considers that it is impossible for a person skilled in the art to readily imagine the structural characteristics of the first cooling system and of the regulation thereof. The cooling system region of the electrodes in this device is very special and cannot be found in another technical field.

The characteristics of the cooling or regulating system which are mentioned in the description must therefore be included in claim 1 (missing essential features (PCT Article 6, PCT Rule 6.3(b))).

a) The first cooling system must be described; a solution is to be found in claims 4 and 5 and page 20, lines 29 to 32 and page 21, lines 11 to 18.

The original claim 1 does not specify which cooling system is referred to. It would therefore be impossible for a person skilled in the art to imagine the structural embodiment.

b) The regulation must also be described; it is not understood how it is implemented; a solution is to be found in claim 7 and page 22, lines 1 to 4.

6. The applicant must take document D2 into account. It should be noted that the original version of claim 1, amended as per item 4, is known from document D2 (see, for example, the figure).

7. The applicant is invited to submit new claims which take account of the preceding and following minor observations.

a) To facilitate understanding of the claims, the technical features they contain should be followed by reference signs placed between parentheses (PCT Rule 6.2(b)). This applies equally to preamble and characterizing portion.

b) Pursuant to PCT Rule 5.1(a)(ii), the description should cite documents D1 and D2 and briefly outline the relevant prior art contained therein.

8. The industrial applicability of the subject matter of claims 1-35 is beyond doubt. Consequently, claims 1-35 comply with the requirements of PCT Article 33(4).